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ABSTRACT

Effects of the physical and social environment on the feeding of severely and multiply handicapped students are discussed. The role of such physical environmental factors as sound, visual stimuli, light, movement, touch, clothing and furniture is considered. Among the social influences operating are the student's physical abilities and disabilities, current health, likes and dislikes, and past feeding activities. Suggestions are made for altering the environment to enhance the development of feeding skills. (CI)

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THE PHYSICAL AND SOCIAL ENVIRONMENT FOR FEEDING THE SEVERELY AND PROFOUNDLY HANDICAPPED

By Carol E. Gupta

INTRODUCTION

Procedures for feeding the severely and multiply handicapped have become technically quite sophisticated in recent years. Many educators of such students have acquired an impressive repertoire of specialized techniques which facilitate more normal, more mature eating skills. Classroom teachers and aides have learned from therapists how to apply jaw control, utilize therapeutic methods of handling and positioning, grade the texture of foods, and make use of adaptive equipment and utensils. Such techniques have allowed many multihandicapped children to experience a more normal, more comfortable feeding time than they have ever known.

However, technique is not enough. Though most educators have a tacit awareness that there exist other variables at mealtime, such as the physical setting or the feeder-student relationship, a fuller understanding of the mealtime environment is needed. Else, a poorly planned or aversive environment can easily blunt the impact of the best techniques.

The mealtime environment consists of two basic components: the physical and the social. The present paper is a very preliminary exploration of these two components. It represents the observations and experiences of the author, classroom teachers and aides, and occupational, speech and physical therapists.

THE PHYSICAL COMPONENT

Introduction

I am going to ask you to take a little trip, now, back to the cafeteria or dining room where your students are fed. What are your feelings as you return to that milieu? Do you feel a tiny knot forming in the pit of your stomach? Or, do you have a calm, warm feeling as you become immersed in that environment? Are you feeling tense, or relaxed? Fearful, or self-assured? Are you enjoying yourself, or hating every minute of it? Whatever you are feeling, can you identify any properties of the physical environment that are triggering these responses?

Let us go a step further. How are these emotions, engendered by the physical environment, affecting your feeding behavior? For example, is the hustle and bustle and chaos making you feel impatient and pressured, causing you to hurry the student or snap at him/her?

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Now, shift your focus from yourself to your students. What kinds of behavior detrimental to their feeding program do you observe? Are some of your students acting distracted, losing concentration on the task of eating? Do they show signs of being upset or irritated? Do you observe an increase in muscle tension or the appearance of an abnormal motor pattern? (By an abnormal motor pattern, I am referring to involuntary movement tendencies, such as a total extension pattern or an asymmetrical tonic neck reflex, which are detrimental in the context of feeding. They not only interfere with the normal position for eating, but also adversely affect oral functioning.)

Can you correlate any of the above student behaviors with properties of the physical environment? This may be difficult, because multi-handicapped students often react to physical stimuli which persons without neurological impairment tend to tolerate or ignore.

Our job as educators is to be aware of these possible sources of disruption, observe each student's responses to them, and intervene where warranted.

Let us begin by systematically examining potentially disruptive influences in the physical surroundings and probable student responses to them. Note that some students may be totally oblivious to stimuli which cause a gross behavioral reaction in others.

1. Sound

Is there a steady, mildly annoying din of background noise (e.g., conversation, fans, television) in the dining room or cafeteria? This may be just enough irritation to set both you and the student slightly on edge. And what about sudden loud noises--dinnerware clattering, children wailing, staff persons scolding? Such auditory intrusions frequently set off startle responses or other involuntary movements in the physically impaired. At the very least, they disturb attention to the task of eating.

2. Visual Stimuli

Similarly, any visual stimulus may compete for the student's attention at mealtime. Shiny, colorful or moving objects seem particularly distracting. Typical examples might include keys dangling from a chain, a mobile suspended from the ceiling, long hair hanging within a student's reach, people hurrying about, a bright shirt or scarf, even a ring on the feeder's finger.

3. Light

Light is so important a visual distraction that it merits separate attention. Harsh, glaring lights can be very irritating to the student, especially one who must sit in a reclining position and stare up at ceiling fixtures during the meal. Direct sunlight or the glare from a snowy field may be a source of irritation for the student positioned facing a window, and with some students, particularly those with a visual impairment, a strong light source is an irresistible invitation to engage in self-stimulatory light-playing.

4. Temperature

A chilly or drafty room not only causes discomfort, it also increases muscle tension in the physically handicapped individual. On the other hand, a room temperature that is too warm can induce sluggishness in the student.

5. Movement

Sometimes educators will engage their students in some form of energetic play, such as "rough-housing" or an accelerated wheelchair ride, prior to the meal. While the student may appear to enjoy these activities, they will more than likely excite the student. The result may be increased muscle tension and abnormal movement patterns in the multiply handicapped individual. Constant jostling of the student's chair during the meal induces similar results.

6. Touch

Though human touch plays an important role in social interaction, we will consider it here as a tactile stimulus. Tactile defensiveness is a rather common phenomenon in the multihandicapped, and it may be a characteristic of the entire body, or it may be limited to the oral region. In fact, some students demonstrate an avoidance reaction to the mere approach of a spoon or the feeder's hand. A therapist should be involved in designing a program for gradual desensitization of such tactile defensiveness.

7. Clothing

The student's clothing may cause discomfort or inhibit movement if it is too tight, bulky, stiff, scratchy, too warm, or not warm enough.

8. Furniture

Proper positioning of the physically disabled student for the meal should be done under the guidance and supervision of a therapist. However, it is appropriate to mention a few general points about the table and chair:

* The chair should enable the student to assume as normal a position as possible;
* The chair must fit the student's body. The table or lapboard should, as a rule, be waist-high;
* The chair must be comfortable. Hard surfaces and edges should be padded. Straps should be appropriately positioned.
* The chair must provide support for those body parts which require stabilization.

9. Utensils

Utensils are another part of the environment which should be modified with the help of a therapist. The only point which requires

elaboration here is that the spoon itself may be a stimulus for abnormal oral patterns, such as a bite reflex or a tongue thrust. A small, shallow, Teflon-coated spoon reduces the liklihood of such patterns occurring.

10. Food

The food itself is a strong source of visual, tactile, gustatory and olfactory sensations--not all of them pleasurable to the student. You must determine whether the student's negative reaction to a particular food is an expression of genuine dislike, part of the student's reluctance to try any new foods, or a fear that he or she will be unable to handle the texture. Appropriate interventions will be discussed in a later section.

We have attempted to catalog the various forces operating in the physical environment. Our next step is attempting to change those variables which are having a detrimental effect on the feeding experience. Possible interventions fall into five general categories:

1. We can modify the offending stimulus. For example, we can tie back our hair if the student insists on pulling it.

2. We can eliminate the offending stimulus. For example, we can turn off the radio or pull the shades.

3. We can move the student away from the offending stimulus to another location in the same room. For example, if the student is constantly being bumped by passers-by, we can move his or her chair.

4. We can totally redesign the existing environment. It is not unusual to find that there are so many disruptive elements in a particular setting that a re-engineering of the entire space is demanded. This could entail removing superfluous visual stimuli, such as flowered curtains or pictures. It may involve restricting staff verbalizations, so that staff persons speak only in a calm, low voice and only to give encouragement and direction. It may also involve the use of room dividers or the re-ordering of furniture to keep the distraction of people moving about at a minimum.

5. We can move the student to a new setting. This intervention is desirable when the existing environment cannot be altered enough to make a significant impact. This would be the case when a student has been fed in a particular setting for so long that he or she has developed a set of conditioned responses to the very room.

For example, it is not at all uncommon to see a student become tense or upset or defiant simply upon entering the dining room. In fact, both the student and the feeder may have built up certain habits and expectations that are cued by the physical setting. Both partners in the interaction may need a complete change of scene if they are to break out of their old response mode into new, more productive feeding behaviors.

We cannot leave the physical environment without some mention of normalization. Most of us are well aware that our students have acquired many abnormal behaviors by adapting to abnormal environmental conditions. A reasonable objective, then, is to provide a more normal physical setting so that more normal behaviors can develop. However, I think the preceding discussion has shown us that an unstructured though normal mealtime setting, such as would be found in our own dining rooms, may contain many disruptive elements. More than that, this normal environment is usually inadequate: it does not provide the special supports and adaptations needed to allow the multihandicapped student to achieve more normal eating behaviors--our ultimate goal.

THE SOCIAL COMPONENT

We move now into the social component of the feeding experience. Within the context of an enveloping physical space, an interaction takes place between two people--the student and the feeder. The nature of this interaction--whether it is a positive, rewarding time or a negative, unsatisfying experience--depends to a large extent on the behavior of these two participants. But what determines their behavior?

The Student

Let's begin by looking at the influences operating on the student.

1. Physical Abilities & Disabilities

With the multiply handicapped student, the level of sensorimotor development and the presence of abnormal physical conditions are primary concerns. Remember that the eating process is affected by the functioning of the entire body, not just the mouth. However, remember also that the student's physical limitations are not necessarily iron-clad. For example, correct positioning techniques can inhibit abnormal movement patterns and reduce muscle tension.

2. Knowledge and Skills

Each student possesses some knowledge of the world and a concept of his or her role in it. Each student also possesses some or many skills: behaviors that he or she is physically capable of doing, knows how to do and has been observed doing.

At mealtime, the feeder is primarily interested in improving the student's eating skills, such as swallowing or lip closure. However, the feeder's success in doing that will be determined in part by the student's knowledge or understanding of the feeding process; e.g., food is to be eaten, food must be taken from the plate to the mouth with fingers or a utensil; etc.

3. Current Health

We all need a healthy body if we are to be fully functioning human beings. Many multihandicapped students are not, in fact, healthy, but are plagued by chronic upper respiratory problems, heart disease and

frequent bouts with cold and flu. It is no wonder, then, that many of them have a small appetite or are lethargic or fussy at mealtime.

4. Likes and Dislikes

Each student probably has established preferences in food, just as you or I do. These should be accepted, unless they are part of a general reluctance to try foods of new tastes or textures. In this case, the rejected food should be re-introduced into the student's diet very gradually, in small quantities, when the student is hungry, and with a favored food.

5. Previous Activity

The student's activities just prior to the meal may affect his or her willingness and ability to eat. A case in point: On the first balmy Spring day after a bitter Minnesota winter, a classroom of our students went for a "walk" in their wheelchairs. This was the first time these students had left the confines of their cottage in several months. Their teacher noticed a markedly improved appetite in all of them at the meal following this refreshing interlude.

6. Past Feeding Experiences

Each student carries the memories of all the thousands of meals that have gone before. These past feeding experiences have no doubt conditioned a number of students' responses which still appear in the present feeding situation. For example, a student's hesitancy to accept unfamiliar foods may be the by-product of a limited exposure to variety in foods. Or, a student's distress at mealtime may be the result of negative feeding experiences in the past. And, as we suggested earlier, abnormal feeding behaviors may be directly related to abnormal feeding practices in previous meals.

7. Feelings and Attitudes

The above six influences, and others which perhaps we have overlooked, help shape the student's feelings and attitudes toward the present meal. These feelings and attitudes themselves constitute still another variable affecting the student's mealtime behaviors.

The feeder, then, encounters in the student a complex human being whose behaviors at mealtime are influenced by many forces. Awareness of the influence of these variables on a particular student will enable the feeder to react with more appropriate expectations and more appropriate interventions.

The Feeder

But what of the feeder? What forces affect his or her behaviors at mealtime? Of the many important influences on the feeder's mealtime behaviors, three emerge as most prominent: technical expertise and skill, feelings, and attitudes. As I mentioned earlier, the technical

component has received a great deal of attention recently. On the other hand, the role of feelings and attitudes in the feeder's behavior has scarcely been acknowledged.

Let's begin by distinguishing between the two. I prefer to think of an attitude as a cerebral function, a way of thinking, a mind set. I define feeling as a visceral quality, a physiological state, which may have psychological or environmental correspondants. For example, if the student I am feeding begins to choke on his food, I may experience a sensation of coldness and a constriction of throat and abdominal muscles. We call this feeling "fear". If someone asks us why we were afraid, we might respond, "Because I thought the student was going to aspirate." If pushed a bit further, we might add, "and I thought someone might blame me or think I was a poor feeder."

Is it apparent how terribly real such feelings are and how very important is their role at mealtime? Another example may emphasize this point: Have you ever fed a student who constantly spit up or gagged? If so, then you were more than likely a bit repelled. And, if you thought the student's behavior was voluntary, rather than reflexive, you were probably angry. Another example--have you ever fed a student who in no way responded to the presence of food on his tongue--the food simply fell out of his mouth? How did you feel the third or the fifth or the tenth time you fed that student? Inadequate? Frustrated? Impatient? Welcome to the human race. The experience of feeding a severely multihandicapped student can elicit some very negative emotions at times. These feelings may be communicated to the student in ways of which you may not even be aware: the tone and pitch of your voice, the tenseness of your muscles as you touch the student, the expression on your face, even your movements and posture. These behaviors reveal your feelings to the student.

If they communicate hostility or lack of caring, the student may well become tense or non-cooperative. On the other hand, if your demeanor communicates affection, confidence and enjoyment, it is likely that the student will relax and do a better job of eating.

Obviously, we would prefer to have a positive impact on the student at the mealtime. However, some negative feelings are a normal feeder response at feeding time. How can we prevent these feelings from having an adverse effect on the student?

We have often found it helpful to acknowledge these feelings and discuss them with a co-worker. Another possibility is simply having someone else feed a student with whom you are having problems. Also awareness of the influences acting upon a student can change your feelings about him or her. For example, discovering that the student's behavior of clamping down on the spoon is a bite reflex and not willful misbehavior can change your anger to understanding.

One of the most effective ways of changing feelings is choosing new attitudes--toward the student and toward mealtime itself. Beginning with the student, we can nurture in ourselves what Carl Rogers calls

"unconditional positive regard." To me, this means valuing the student as another human being and affirming his right to be whomever he is. This kind of attitude goes far beyond a view of the student as merely the recipient of food.

Similarly, a positive attitude toward the meal itself would be that the meal is a splendid opportunity for learning. It is seen as more than a necessary part of the student/s survival requirements, more than a time when a certain amount of food must be gotten into the student. The meal is viewed as a process rather than a produce-oriented event, with the emphasis on quality of the total experience rather than on quantity of food consumed.

In summary, there is much that the feeder can do to improve the social component of the meal. He or she can cultivate positive attitudes toward the student and the meal, channel negative feelings into non-destructive outlets, and develop a full appreciation for the student as a complex human being.

I hope that by now you have developed some notion of how you can structure the physical and social components of the meal for more effective utilization of specialized feeding techniques.